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ORIGINAL DEPARTMENT.

Lectures.

LECTURES ON CHOLERA.

By PROF. ALONZO CLARK, M. D.

(Being a full synopsis of Lectures on Cholera, recently delivered at the COLLEGE OF PHYSICIANS AND SURGEONS, New York, and specially reported for the MEDICAL AND SURGICAL REPORTER.)

III.

Causes and Nature of Cholera.

The next point in the consideration of this disease is its cause, and the mode in which that cause acts upon the system, so as to produce the various phenomena, which have already been noticed.

The literature of the subject abounds with a variety of theories of the manner in which the cause of cholera acts. One theory is that the disease is zymotic in a certain degree, in other words, that after the introduction of the poison into the system, by a process of fermentation of some sort, a poison is produced like that which was at first introduced, if not in the body of the patient himself, yet in the excretions.

Another very prevalent theory is that there exists during a cholera epidemic, and as its cause, a peculiar condition, the so-called *epidemic constitution* of the atmosphere, which is widely diffused, and acting as the general cause, brings on an outbreak of the disease whenever it meets certain local circumstances and causes, the so-called *localizing conditions*.

Dr. SNOW has another theory, according to which the disease is a communicable one in a particular way: he claims that in the alimentary canal of the cholera-patient a poison is produced, which consists of a something capable of being absorbed by or floating in water; that the water of wells and cisterns, during an epidemic, becomes impregnated by this poison and causes the spread of the disease; that a reason why the disease is so much more frequently communicated to nurses and attendants around the patient than to physicians, is because the former are less

cleanly, and hence more frequently subject to introduction of this peculiar poison into the system.

In regard to this theory, certain things must be taken in consideration. Dr. SNOW claims that the poison is generated in the alimentary canal, and carried by the evacuations and discharges from the stomach and bowels. Now, it is testified to by SCHMIDT, of Munich, that a man, in a state of intoxication, drank a large beer-glassful of the vomit of a cholera-patient, without being followed by the first symptom of cholera, and physicians of Munich are said to have freely tasted and even swallowed the choleraic transudations, without ill effects.

Again, a noticeable fact in the geographical course of cholera, is that it almost uniformly ascends rivers and streams; thus it ascended the Volga, Thames, Hudson, and the Mississippi. If the disease was propagated by the water contaminated by cholera dejections and evacuations, it is plain that it should descend in its course. In regard to some rivers it may be objected that they are not resorted to for drinking and domestic purposes. But in others which are thus freely used, as for instance the Mississippi, the disease has always travelled up-stream, not down.

Another theory, which indeed may be looked upon as but a modification of the former, is that adopted by several German physicians, which also considers a peculiar poison to result from the discharges of the patients, but not immediately. The cholera discharges, according to THIERSCH, are not poisonous at first, but become so, after the lapse of some time, by decomposition and fermentation under an elevation of temperature of at least 50° Fahrenheit. According to facts brought forward in support of this theory, this fermentation which develops the poison in the discharges ceases in about eight days, and then they become inert.

The chief evidence upon which THIERSCH bases his opinion is that he fed a number of mice on fresh cholera discharges, and a number on cholera material which had undergone fermentation. The animals fed on the first remained perfectly well, while those that had been living on the fermented discharges were killed by it, under

symptoms resembling cholera, diarrhoea taking place before death, and post-mortem appearances being analogous to those in man. Animals which were fed on old cholera evacuations, after fermentation had ceased, suffered as little as the first.

The logical conclusion, if this theory be true, is that means of disinfecting the evacuations of cholera-patients by chloride of lime, sulphuric acid, etc., constitute a chief and important element of prophylaxis. In support of this, it is stated that there are two prisons in the neighborhood of Munich; in one very strict and energetic measures were adopted, during the prevalence of the disease, to disinfect the discharges of all the prisoners and inmates, and the result was that only one case occurred among five hundred inmates; in the other institution, in which no means whatever were adopted of disinfecting the discharges, 15 per cent. of the inmates were attacked.

The evidence in regard to this theory is not yet conclusive; still it deserves attention, and should remain open for further investigation.

Another theory which has been advanced is that the influence of ozone, negative or positive, in the atmosphere, is connected with the causation of the disease. There are many quite opposite opinions regarding this theory, and the influence of the presence or absence of ozone in abnormal quantity. Dr. PETERS, of Lexington, Ky., during the prevalence of a cholera epidemic, instituted investigations as to this point, and according to his statements, not much change in the ozonic condition of the air could be observed; if there was any change, it was unimportant. The most recent observations probably on this subject are those of Dr. B. W. RICHARDSON, of England. Some of his conclusions as to the facts at present known respecting ozone are stated as follows: It is always present in the air, naturally in the proportion of about 1 part in 10,000; it is rapidly destroyed in large towns, crowded, close, and filthy localities; ozone gives to oxygen its life-supporting properties; its effects are destroyed by great heat; diffused minutely through the air, it produces, on inhalation, distinct symptoms of acute catarrh. When animals are subjected for a long period to ozone in small proportions, the agent acts differently in different animals; carnivora die, after some hours, from disorganization of the blood, while herbivora will live for weeks and suffer from no acute disease. Science has not yet actually demonstrated that the presence of ozone in the air can produce actual disease, though the facts approach to demonstration that catarrh is thus

produced. During periods of intense heat of weather, the ozone loses its active power. Ozone acts rapidly upon putrefactive organic matter, breaking up the ammoniacal products of decomposition, and hastening organic destruction. In a negative condition of air, i. e., the absence of ozone, the purification of the organic matter is greatly modified, and the offensive products are increased; wounds become unhealthy and heal slowly in such negative air, and though there is no demonstrative evidence that any diseases are actually caused by this negative condition, the inference is fair that diseases which show a putrefactive tendency are influenced injuriously by a negative condition of the oxygen of the air. It is also probable that during this state, decomposing organic poisonous matters become more injurious. And finally, as ozone is used up in crowded localities, and as it is essential that ozone should be constantly supplied, in order to sustain the removal of decomposing substances and their products, no mere attention to ventilation and other measures can be fully effective, unless the air introduced be made active by ozone. Fever hospitals and other large buildings in towns should be artificially fed with ozonized air.

All, however, that is positively known regarding ozone, in the present state of science, is a bare probability that if it exists in certain quantities, it may purify the air. As to its causal connection with cholera, nothing is positively known.

Electricity, too, has been charged with being the cause of cholera; at least it has been claimed that its presence or absence has something to do with its production. A French observer has made a statement that he observed, during the prevalence of cholera, that he could not obtain sparks as usual from an electrical apparatus, and in England it is said to have been noticed that, during a cholera epidemic, a large horse-shoe magnet attracted and held suspended much larger quantities of iron than ordinarily, and that as cholera abated and ceased, its attractive power diminished also.

These and similar observations, however, do not bear sufficient weight to justify any decided conclusions.

Leaving the question as to the influence of ozone, still another theory has been proposed by Dr. MITCHELL, who finds the cause of cholera to be a fungus or fungoid spores, developed in the earth or in the atmosphere, and introduced into the system by the respiration. In another branch of this theory, the origin and growth of the fungus

gus is placed into the body itself. This theory received a special importance when Drs. BRITAIN and SWAIN announced that they had found in the drinking water of London the *cholera fungi*, which were minutely described. At Edinburgh, however, these fungi could not be detected with the microscope, neither in the drinking water nor in the dejections of the patients. Dr. PARKER, the microscopical anatomist of the London Hospital, states that fungi of various sorts are not unfrequently found in the intestinal canal of animals and man, but that they are perfectly inert. The strongest reason, however, for discrediting this statement is in the result of the investigations of a committee appointed by the College of Physicians of England, who examined into the matter. They reported that the *rings*, which were described as forming part of the cholera fungi by SWAIN, were found to be remnants of onions, turnips, and other vegetables; the *oval cells*, also claimed as part of the cholera fungi, were ordinary spores of the rust of wheat or corn, such as are frequently found in bread; and the *disk*, also part of the supposed cholera fungus, had a similar origin. So, on the whole, this idea comes to nought, as well as Dr. SNOW's theory, unless further and stronger evidence is produced.

Another view is, that it is produced in a manner similar to yellow fever. This theory claims that there are certain wide-spread conditions, atmospheric or terrestrial, which produce a certain predisposition; and that added to these a special miasm is produced, external to ourselves; a certain poison is liberated in the air, unknown in its nature, intangible, known only by its effects, which will reproduce itself, and so render a whole town infected. This we know of yellow fever, which is not an indigenous disease, but can be kept off by rigid quarantine and strict sanitary rule. In just this way it seems cholera is produced,—by a special poison, a malaria, the production of certain general wide-spread conditions and local influences, but not reproduced in the system.

All these various theories agree in one point, namely, that there is a poison which gives rise to the disease, and this is a fact which cannot be disbelieved.

How this poison is introduced into the body cannot be confidently answered. We might assume that it is absorbed through the surface of the skin, the lungs, or the alimentary canal, etc. But, in one way or another, it is introduced, enters the blood, and circulates through the system.

Introduced into the system, the poison of cholera soon begins to act upon the *ganglionic nervous system*. It is true, the examinations made after death, of the centres and nerves of the ganglionic system have not led to constant appearances; and, indeed, they are not found to have undergone marked changes, except occasional softening and enlargement. But still this is the best hypothesis which we can present, as to the manner in which the poison of cholera acts upon the system, and that we can find no decided anatomical lesions, is no real excuse for not accepting it. A thousand changes are produced and observed in the innervation of the organs and tissues of the body, characterized by the most marked phenomena, without our being able to discover any physical appearances in the nerve structure, which would account for them. Certain medicinal substances appear to have specific affinities in their action, to different parts of the nervous system; strychnia, for instance, upon the spinal system, opium upon the brain. Now, in a case of strychnia-poisoning you observe the most fearful commotion of all the muscles controlled by the spinal axis, resulting in death. Still, if you search after death for any marked anatomical lesions in the spinal cord or nerves, none will be found. Thus, again in a person dead from an overdose of opium, though congestion may be found in the vessels and meninges of the brain, the most careful examination will not discover any microscopical changes in the brain-cells or the minute structure of the organ. Thus certain agents, indisputably, exert a powerful action upon various parts of the nervous system, with no accompanying special lesion that can be observed; we might run through the whole of the medicinal articles acting upon the nerves to illustrate this point.

While, then, the absence of pathological evidences after death forms no objection to this hypothesis, there are certain analogies which speak strongly in its favor. The branches or filaments of the sympathetic nerve, which go to the eye, govern and regulate the circulation of that organ; if they are divided or disordered, you observe hyperæmia, ecchymosis, and a series of changes, which finally lead to ulceration and destruction of the organ. So the ganglionic system everywhere, but more particularly in the alimentary canal, governs and regulates capillary circulation. The poison of cholera begins to act upon the ganglionic system, partially paralyzing it, and gradually increasing in its effects during the period of diarrhoea. The blood flows into these vessels in unusual tides, giving rise to

hyperæmia more or less intense, and from which the copious discharges are derived; this goes on until the blood, by the constant drain of its fluid constituents becomes markedly and seriously changed; then follows the disturbance in the spinal system, the cramps and convulsions, which, it is probable, are entirely reflex. The hyperæmia at first does not manifest a tendency which it afterwards shows; but, as it continues, much as in the eye after division of the branches of the sympathetic nerve, assumes an inflammatory character, for we cannot, on looking at the post-mortem appearances avoid the conclusion that there is inflammatory-hyperæmia, or even a certain degree of inflammation. There is, however, no organizable, plastic deposit. The material thrown out, as described in a former lecture, is something like the exudation of diphtheria; and, it may be added here, that this infiltration of granular matter into the intestinal mucous membrane and glands, seems to be almost characteristic of the disease.

Dr. HORNER, as early as 1832, noticed and described the detachment and denudation of epithelium, and sloughing of portions of the mucous membrane; and he believed the disease to be inflammatory. PIROGOFF, too, says that the cholera appearances have great analogy to inflammation.

In summing up the evidence regarding the cause and nature of cholera, it may be stated then, that there is a poison, the exact nature of which is not yet perfectly understood; that this poison, introduced into the system, causes disturbances of innervation, or a sort of paralysis of the ganglionic nervous system; that this leads to extensive hyperæmia of the alimentary canal, resulting in the symptoms described, and to the reflex phenomena alluded to, and as the disease progresses, obtaining more or less an inflammatory character.

Experimental Researches on Epidemic Cholera.

In a memoir presented to the Academy of Sciences, M. A. BAUDRIMONT asserts the following conclusions: That, in cholera, the albumen of the blood is transformed into disastose, and is found as disastose in the dejections; that the presence of disastose, and also of a matter analogous to yeast, is remarkable, as representing the two products successively formed, at the expense of albuminoid matter, during germination and fermentation; that as there is a great resemblance between the alvine dejections in cholera and the pancreatic juice, may it not indicate that cholera is due in great part to a hypersecretion of this fluid, and that it is principally by the canal of WIRSUNG that the choleraic fluids and the matters they hold in solution pass into the intestine?

Communications.

IS CHOLERA CONTAGIOUS?

By CHAS. A. LEE, M. D.,

Of Peekskill, N. Y.

I am much obliged for the favorable notice in the REPORTER, of my letter to Dr. SAYRE, of New York, on cholera, and your endorsement of the theoretical and practical views therein contained. But you mistake me in supposing that I designed to claim those views as original with myself. They have now, I believe, very generally prevailed for more than ten years in Germany, and among the British army surgeons in India; and have been adopted, to a considerable extent, by our profession in France, England, Italy, and other countries of Europe, to say nothing of practitioners in the United States and Canadas, some of whom, like Prof. ROCHESTER, of Buffalo, have not only held, but publicly taught them for many years past.

Under these circumstances, I did not feel called upon to say that the theory in question did not originate with me, and especially as my letter was not written for publication.

I know "the considerations presented are similar to those of Prof. NIEMAYER," of Germany, just as NIEMAYER's are but a simple digest or resumé of those of Profs. PETTENKOFFER and DELBRUECH. It is not very probable that the latter even would claim their paternity exclusively, as they very well know these views have been held by many independent observers in various parts of the world, during the last thirty years. It would, indeed, be the height of absurdity, at this late day, for any one to attempt to appropriate this doctrine as his private property. As well might he pretend that he originated the doctrine of the contagiousness of small-pox, measles, or scarlet fever. I know that NIEMAYER says "we are indebted for this theory to PETTENKOFFER and DELBRUECH;" that may possibly be the case in Germany, but it is not the case, at least, in India, nor in this country. That such opinions have originated in countries so far remote, and been held by so many independent observers, is *prima facie* evidence of their truth. I believe they will stand the test of the most rigid inquiry. It is the only doctrine which can explain all the facts of the case, and no arguments can be brought against it except *negative* ones, founded, like the theory of "a mysterious atmospheric cause," and "an epidemic constitution of the atmosphere," on ignorance. I have called all speculations founded on such assumptions *reasoning ab igno-*

rantid—if even it deserves to be called reasoning at all—where *all the facts* known in relation to the history of cholera, wherever it has prevailed, are absolutely and totally opposed to such a theory.

As long ago as 1832, when I had charge of a large cholera-hospital in New York, and where I have had an opportunity, first and last, of treating and seeing treated nearly one thousand acute and severe cases of the disease, I became satisfied that this doctrine of "a mysterious atmospheric cause" was not tenable, and would have to be abandoned for something more rational. For example, cases like the following were of frequent occurrence: A gentleman, who had been exposed to cholera in Buffalo, left for his home in the town of Mount Washington, Mass., situated on the Taconick range of mountains, fifteen hundred feet above the ocean. He reached there the next day, and was immediately seized with cholera in its most malignant form. My brother-in-law, the late L. TICKNOR, M. D., of Salisbury, Conn., was called to see him, and staid with him till he died. During his illness, eight of the neighbors came in to see the patient and proffer assistance. Of these, six were attacked with the disease within thirty-six hours, of whom four died. Dr. TICKNOR, from whom I soon after obtained these facts, stated to me that he believed there were no other cases within fifty miles, and he could not doubt that the disease was brought there by the gentleman who was first attacked.

Were it necessary, I could multiply such instances to almost any extent, and there is hardly a practical physician in our country, whose observations and experience have extended back to the year 1832, who cannot quote parallel cases. Can a *general* atmospheric distemperature explain such facts? And yet, one of your correspondents says, "A person with Asiatic cholera, if removed from the place where the local causes of the disease exist, to a place where such causes do not exist, can never communicate the disease to another person!" A more unfounded statement was probably never made. There was no "local filth" nor "impure air" on Mount Washington, in the case above given; had there been, the disease would doubtless have extended, and perhaps become epidemic, as in other instances where these conditions are met with. As it was, those only were attacked who were about the patient, and who were exposed to exhalations from the evacuations, etc. Indeed, nothing seems to me more unphilosophical than this old worn-out theory of a "mysterious epidemic constitution of the atmosphere." It has served no

other purpose as yet than an apology for ignorance. Without a single fact to support it, it has only been used to involve the subject in mystery, and to prevent the adoption of the only effectual means against the introduction of the disease into a country, viz., by the establishment of an effectual quarantine. Spain succeeded, in 1854, by a most rigid system of quarantine in all her ports, in wholly excluding cholera from her limits, and it was the only country in Europe that did succeed or that had a quarantine deserving the name.

"We suppose," says your correspondent, "the cause to be in the atmosphere, because it is so wide-spread, exerting its influence over a great extent of territory at the same time." Indeed! Why then are the crews and passengers of ships at sea never attacked with cholera except they come from places or ports where the disease prevailed? Passengers from Paris, sailing from Havre, having been exposed in the former city to choleraic poison, as in the case of the *Atalanta*, are attacked soon after coming on board, and the disease rages in a most fatal manner among the steerage passengers, while not one in the first cabins, though exposed to the same "mysterious atmospheric cause," is attacked. I say this view is unphilosophical, because we are never justified in seeking for more causes than are necessary to explain any given phenomena. This *Deus ex machina* in the present case is worse than a fifth wheel to a coach, for it seriously obstructs the progress of our knowledge, inasmuch as it removes all motives for inquiry. It might have sufficed for the dark ages, when men not only courted *mystery*, but were satisfied with nothing else.

When I am told, that "without some such mysterious atmospheric influence, we can never have an epidemic of any disease," I ask for the proof. "O," it is replied, "it is *mysterious*; we know little or nothing about it, but you may rely upon it, *it is so*; it must necessarily be so; it is the theory generally adopted!" So it comes to this, we have a theory "generally adopted," and therefore we are bound to receive it! How much more simple, and more consonant with the facts of the case, to admit the presence of a *choleraic virus, or poison*, generated, if you please, under unknown conditions in the far east, propagated in some way, only by human intercourse, and following, chiefly, the great routes of travel; uninfluenced by winds; but requiring, for its epidemic prevalence, an impure atmosphere, and all those influences which lower the vital forces, and impair the general health; travelling, in no in-

stance, any faster than ships and men travel; deviating, here and there, from the main routes; just as men deviate in their travels; but never spreading to any alarming extent in a pure air; in this respect, resembling typhus fever, small-pox, dysentery, and many other infectious diseases; never invading a country, *broad-cast*; as it should in all cases, if dependent on a "general epidemic constitution of the atmosphere;" but creeping slowly; now here, now there; sometimes attacking a town or village on one side of a stream, and passing over another on the opposite bank, to all human appearance, equally exposed; prevailing in some localities, squalid with filth, and overcrowded with population; while others, perhaps not far remote, and with an atmosphere equally loaded with organic matter, and even more unfavorably situated as to elevation, ventilation, and the character of the buildings and population, entirely escape. How are such facts to be explained on the theory of a "general atmospheric cause?" Even if we should admit that the disease was caused by some "unknown constitution of the air," we should have to concede, also, that it is propagated, and prevails, to a certain extent, independently of an epidemic concurrent influence. We admit, that it is aggravated by certain states of the air; as great humidity; the presence of animal and organic matter, and putrid exhalations, etc.; and it is only when these conditions are present, that the term *epidemic* is strictly applicable to the disease.

Some diseases are simply infectious without being epidemic; others are both infectious and epidemic; others are epidemic, and only contingently infectious; but cholera, like the eruptive and typhoid fevers, is *infectious*, and not essentially, epidemic; except under those favoring conditions of the atmosphere above mentioned. In other words, it is a specific disease, arising from a specific cause, but promoted and disseminated by the aid of various concurrent causes; among which, impure states of the air; dirty, crowded, and close apartments; crowding of the sick; and a high dew-point, are the most prominent.

Your correspondent states that "an innumerable multitude of facts might be given, which would prove, *negatively*, that cholera is not contagious." Negative proof can never outweigh that which is positive. Besides, this statement is believed to be utterly without foundation. I have, for thirty years, diligently tried to find one such case, well substantiated, but without success; while we have scores of instances where the inmates of establishments completely isolated,

have entirely escaped. As to the other negative facts, showing that cholera is not contagious, they would equally prove that no disease, whatever, is contagious. So many, indeed, escape the infection of measles and scarlatina, who have been exposed to these diseases, that some of our standard medical writers doubt whether these can be properly called contagious diseases.

I am aware that the above views are, on some points, at variance with some I formerly entertained and published to the world. But I suppose we are all at liberty to correct and change our opinions, as we grow older, and as I would fain hope, better informed also. At any rate, I have no pride of opinion on this, or any other subject, that I am aware of; and am ready to be convinced and renounce my views, *instantly*, if any one will only present sufficient evidence to outweigh that, which I believe, can be arrayed against him.

SMALL-POX IN MOBILE, ALABAMA.

By H. J. PHILLIPS, M. D., U. S. A.

Surgeon-in-Charge of Post Hospital.

About the middle of September, 1865, *variola confluens* made its appearance as an epidemic in the city and environs of Mobile, amongst the troops stationed here, although the freedmen and some citizens were attacked some time previously. The first case noted in the records of the Post Hospital occurred on the 11th of that month. The small-pox hospital is a branch of the U. S. Post Hospital, and is situated about two miles from the city, in a field; it is an ordinary southern house, but is well ventilated, and on rising and dry sandy ground. It contains about sixty beds. From the above-named date, to the 31st of January, 1866, sixty-three cases have been admitted, of which fifteen have died; of the entire number, only seven were white soldiers, the remainder being U. S. colored infantry men. No deaths occurred amongst the whites. The shortest fatal case was three days, and the longest twenty-seven. It will be noticed from the above statement that the deaths were about twenty-four per cent. One patient had had the disease before. An order was issued to the different surgeons of regiments to have the men vaccinated, and this I believe was carried out as far as practicable, but probably a great number were not vaccinated (detailed men, and those on guard, possibly having been forgotten.) This fact rendered it difficult to obtain any exact statistics with regard to vaccination. About five hundred cases have occurred amongst the inhabitants and troops in and around the city to the end of January, of which num-

ber about one-eighth was amongst the soldiers. Death took place generally about the tenth day. As far as the whites are concerned, the epidemic cannot be looked upon as confluent, although it is decidedly so with regard to the negroes. No malignant cases (*nigra*) have been seen, but several were complicated with buboes, (let it be understood I am now speaking of the disease as it occurred among the troops.) The colored race seem particularly liable to *variola*. Their mode of life and habits conduce greatly to this susceptibility. They are dirty in the extreme, and crowd together in badly ventilated dwellings, and although they do not do this so much in camp, still, on going out on leave, they soon flock to the huts of the freedmen, and there catch the disease. This accounts no doubt for its greater prevalence among the blacks. Cold weather seems, as usual, to aggravate or rather increase the epidemic, because windows are then closed, and the poison concentrated. The antiphlogistic treatment has been adopted, and with the greatest success.

Medical Societies.

PHILADELPHIA CO. MEDICAL SOCIETY.

(Reported by Wm. B. Atkinson, M.D., Recording Secretary.)

Wednesday Evening, Oct. 25th, 1865.

Cholera—(Continued from page 179.)

Dr. GEORGE HAMILTON alluded to the unusually large attendance of members as an indication of the importance of the subject for discussion, and of the interest felt in all that pertains to the fatal disease with whose approach we are now threatened. Asiatic cholera, like all other diseases characterized by profound venous congestion, is excessively fatal; so much so, that of those violently and suddenly attacked, about one-half perish, and of these, one-half terminated in twenty-four hours from the moment of invasion. Much of this mortality is doubtless unavoidable, partly in consequence of the intemperate habits and broken constitutions of those assailed. Yet, the want of success in the management of cholera is perhaps, in part, owing to its ill-defined pathology, and, in part, to a degree of timidity in encountering popular prejudice in the treatment of the disease.

Whatever diversity of opinion may exist in reference to the primary cause and intimate nature of cholera, one marked pathological condition—profound passive congestion—is obviously present in nearly every violent attack, as is evident from the coldness of the extremities, sometimes of the tongue, tips of the ears and nose, purple

color of these parts, and very small feeble pulse, in some cases nearly imperceptible in a few hours after the attack, though the subject may have been of robust constitution. In this condition of the organism, the vital functions are in a measure suspended or perverted; the secretions nearly cease, and the profuse watery discharges from the stomach, and more particularly from the bowels, are colorless; showing the absence of bile; and as the reappearance of this secretion is one of the harbingers of returning health, the efforts of physicians have perhaps been more generally directed to the restoration of the biliary secretion than to the fulfilment of any other remedial indication. In many cases, these efforts have failed to accomplish the object desired. Nor is this surprising, in view of attempting to restore the secretion of bile by acting directly upon the liver, without due regard to the actual condition of that organ as dependent upon the general pathological condition of the entire system.

The congestion of cholera is of too much significance to attempt to sever its connection, however obscure, with the exhausting serous discharges that more especially arrest our attention, and call so urgently for relief; and it must be borne in mind that many fatal cases of cholera have occurred in the East and upon the plantations of Louisiana, without the usual serous discharges. So long as the heart, lungs, and spinal marrow remain passively congested, so long must every portion of the organism partake of this condition.

Now, it so happens that the more active functions of the animal economy are carried on, more especially, in the arterial system, the venous being rather subsidiary. But, in the case before us, the arteries carry but a modicum of the blood necessary for the support of these functions, and this blood, unfortunately, is found to be almost identical, in its dark and carbonized appearance, with that contained in the veins. That the liver, or any other secretory organ, should continue to yield its appropriate and normal secretion, presupposes that it be furnished with its accustomed normal material and nerve-power; yet this is impossible, pending the condition alluded to.

Again, during the violence of an attack, the stomach is nearly always incapable of receiving or retaining food; digestion is almost gone, and consequently no occasion for the free secretion of bile seems to exist; yet the gall-bladder has occasionally been found, after death, filled with bile, whilst the discharges from the bowels were almost without color. Under such circumstances,

we believe it is not desirable to attempt a forced secretion of bile by the use of calomel in oft-repeated small doses, as is so often done, and, as we are disposed to think, frequently without success; and believing, as we do, that such treatment is too slow in its operation to meet the exigencies of a threatening case. If called to such a case, one of the first objects should be to produce reaction of the vascular system; that is, to restore a normal circulation of blood to the arterial system, for in so doing, we aid in restoring lost temperature, lost secretion, lost nerve-power, and lost function of every kind.

But what are the means most likely to accomplish this important object? If we refer to the practice of many of those who have had most to do in the treatment of Asiatic cholera, we shall find that no single measure has produced more benefit than venesection, when judiciously directed and supported by other concurrent treatment. Yet, this measure is one of the most unpopular, at the present time, either in or out of the profession, that could be proposed, and is consequently not likely to receive that consideration which the experience just alluded to would seem to demand. As a rule of practice, in reference to disease in general, we would reprobate the use of the lancet; believing that fever and inflammation, the more usual manifestations of diseased action, are in themselves eliminative, or reparative, or both. Yet, this view affords no rational ground for the rejection of venesection in those profoundly passive congestions in which arterial reaction must soon be re-established or the vital principle must be stifled in its very fountain head, and source. Whenever, then, cholera suddenly and violently assaults the robust, and presents the condition referred to, blood may be drawn, the finger of the physician, at the time, resting upon the pulse, as a guide. To suppose, as is often done, that the abstraction of a few ounces of blood, so carbonized as to be almost unfitted for the purposes of life, if not positively deleterious, would depress the strength of the patient, is, we think, both illogical and contrary to experience. Before or immediately after venesection, an emetic of ground mustard and water should be given, and this will serve, by its stimulating effect upon the whole system, to aid in the restoration of the arterial circulation and animal heat. This may be further promoted by the use of stimulants; such as carb. ammoniac, or spirituous liquors, where these do not seem to disagree with the patient. The greatest possible attention should be given to prevent or remove the coldness of the extremities, as this coldness, accom-

panied as it generally is with an excessive and cold perspiration, is in itself capable of depressing still further the already wasted vital power. To succeed in this requires that the cold perspiration be constantly wiped away by heated flannels, and the limbs rubbed incessantly by strong hands and willing hearts. To arrest the exhausting discharges and alleviate the cramps that so commonly torment the patient, is no easy task whilst a profound congestion exists; yet much benefit often accrues from the liberal use of morphia in camphor-water, or pills of opium and camphor, or aromatic tinctures, or at times creasote. These and many other articles, generally of a stimulant or astringent character, having often been tried in vain, a large dose of calomel—15 to 20 grains—has in many instances, probably from a decided and peculiar impression upon the nervous coat of the stomach, promptly arrested both vomiting and purging. Frequent rising from bed, for the purpose of going to stool, should if possible be avoided, and it would, in fact, be best to instruct the patient that, as he values his safety, he should resist to the uttermost the solicitations to the frequent use of the stool.

Dr. ROBERT BURNS said that he had felt exceedingly interested in the discussion from its commencement. In treating the disease in 1832 and 1849, he adopted the practice just described by Dr. HAMILTON, and was not aware that that gentleman had pursued it, though he himself had carried it out, particularly in 1849. When the cholera broke out in that year, he reflected seriously as to what course ought to be pursued in its treatment, and endeavored to form for himself some pathological idea which should guide him in his practice. While meditating upon this point, he was himself seized with cholera at midnight. A deathly sickness pervaded the body; but with the assistance of his wife, he succeeded in taking from his arm some sixteen ounces of blood. The feeling of relief which followed that venesection was one never to be forgotten. The skin had been cold and cramps were coming on, but the moment the blood flowed, immediate relief was felt; he then took a dose of calomel and opium, followed by castor oil, and in a few days had completely recovered. This course he afterward pursued in every case.

In looking over his books recently, he saw there some two hundred cases of cholera, and expressed his entire confidence that out of all the cases of this disease coming under his notice that season he did not lose six. But while practising venesection freely, he did not omit other neces-

ary measures, but persevered in them, particularly in inducing general warmth by frictions and other means. If he arrived in time, that is before the collapse, he invariably bled the patient.

He then related somewhat in detail, cases to which his attention had been directed as being remarkable. He was sent for by a lady, aged about sixty-five, and found her cold, in a clammy perspiration, having corrugated fingers, with lividity about the lips and extremities, vomiting, and rice-water discharges. He dreaded doing anything for her, as he scarcely thought there was a possibility for any treatment to be successful. However, after friction was applied and a warmth created in the extremities, he resolved on opening a vein as a *dernier resort*, because of the apparent fact of congestion in the large venous trunks or overloading of the lungs with venous blood. If the heart could be made to perform its office, at the same time keeping up the use of stimulants, there would be some prospect of success. When the vein was opened, a drop of dark blood appeared at the orifice. By continuing friction to the arm, leaving the ligature tightly on, yet not so as to interfere with the arterial circulation, and using friction to the distant extremities, at the same time persevering with the use of stimulants, the blood came faster, drop by drop, till after the expiration of half an hour, it quickened into a small stream. It then continued to increase, the pulse rose, the lividity of the surface passed away, and before he left her, the pulse was active and the warmth of the body much increased. The old lady finally got well, and he believed was still living. In this case, about fourteen ounces of blood were taken.

In another instance, a young man was attacked with the most severe convulsions; every muscle of the body appeared to be convulsed and drawn into knots; and to all appearances the man was dying. Upon his arrival he found considerable pulse, sufficient to justify venesection. The patient was freely bled, and in the course of fifteen minutes he was perfectly quiet. The doctor then gave him, every two hours, one grain of calomel and one-fourth of a grain of opium; and to the astonishment of all, the patient became perfectly calm. On the following day, he was under the necessity of taking a little more blood, the reaction having become too high. That man recovered speedily and perfectly.

All the secretions being obstructed and perverted, and in consequence of the density of the blood, the lacteal fluid in the thoracic duct was incapable of entering the subclavian vein, hence

that fluid became incapable of entering the blood, and by an exosmotic action, the rice-water discharges took place; by venesection, the heart and large venous trunks were relieved, and the chyle was again enabled to enter the circulation.

In conclusion, he expressed himself in favor of the more free use of the lancet, and thought the profession had yielded too much to the popular ideas of the day, in failing to use that instrument. The lancet furnishes the medium for relieving congestion, checking inflammation, and causing the arterial circulation to increase in a depressed condition of the system, relieving the venous congestion and producing a more healthy condition of the system.

[To be continued.]

NEW YORK ACADEMY OF MEDICINE.

Cholera.

At the last meeting (March 7th) of the Academy, the subject of cholera was continued.

Dr. ADAMS alluded to the treatment of the disease by the spinal ice-bag, the effect of which is claimed to consist in the diminishing of hyperæmia of the cord, and hyperæsthesia of the nerves. He asked for information regarding the subject.

Dr. BULKLEY stated that during the epidemic in 1832, in Paris, where he was at the time, this was one of the methods of treatment used; not in the form of bags exactly, but the application of ice along the spine, and hot applications over the abdomen.

None of the gentlemen regularly announced to take part in the discussion of the evening being present—

Dr. SAYRE was called upon to make some remarks. He stated that the subject was too important to be allowed to go by default, and then went on to discuss at some length, the questions of the portability of the disease, and the necessity of quarantine. He quoted, as an example, how views regarding these matters have of late been changed, the recent report of Dr. READ, of Boston, to the authorities of that city, in which that gentleman, in direct opposition to his former reports, fully endorses the theory of the portability of the cholera poison, and advocates strict quarantine. He expressed the hope that the Academy would use their influence with the general government for the establishment of a uniform quarantine.

Dr. HARRIS acknowledged that there was evidence of the portability of one or the other of the causes of cholera.

(Further remarks, unimportant, however, were

made;—nothing new was elicited, which is not contained in the lectures of Prof. CLARK, now in course of publication in the REPORTER.)

PATHOLOGICAL SOCIETY OF NEW YORK.

(Meetings of February 24th and 28th.)

Encephaloid Disease of Testicle.

Dr. HUTCHINSON presented a specimen of encephaloid disease of the testicle; no hereditary disease could be traced in the patient, and his virile powers had always been good. From his account, it appears that one of his testicles had never fairly descended, but remained lodged just external to the inguinal canal. No inconvenience, however, resulted from this, until, some time ago, he received a blow upon the tumor by running against something, when it commenced to be painful, and to enlarge, until it obtained to the size of half a small cocoa-nut. An explorative operation was followed by extirpation of the tumor, which proved to be medullary cancer.

Urinary Calculus.

Dr. FINNELL presented a urinary calculus which a man had passed, measuring in its three dimensions respectively, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, of an inch. Its passage from the kidney to the bladder had given the patient much more pain than its passage from the bladder through the urethra.

Dr. HAMILTON remarked that oil of turpentine had been found a most efficacious remedy in renal and urinary calculi.

Inflammation of the Brain, subsequent to Exostosis from the External Ear and Necrosis.

Dr. AGNEW gave the particulars of a patient who had died in consequence of a general inflammation of the brain and membranes, with effusion of sero-purulent matter, the result of previous otitis with necrosis, sequestration and exfoliation of the entire internal ear. A remarkable feature of the case was, that the patient did not take to his bed until forty-eight hours before death, and retained sufficient consciousness and strength twenty-four hours before death to go to the water-closet, although the post mortem appearances indicated that the cerebral inflammation must have been existing at least ten days before death.

Cystic Disease of Lower Jaw.

Dr. SPEAR presented a specimen of bony tumor removed from a girl, fourteen years of age; it had been attached to the right ramus of the inferior maxillary. It was first observed about a year ago, presenting the form of a small cystic tumor; a dentist was consulted, and an incision made, which gave vent to a semi-fluid, fetid substance, after which the parts were syringed out from time to time, and pressure applied by means

of a pad and elastic band. This treatment was continued for some months without effect, the tumor distending rather than diminishing. A short time ago it was decided to remove the diseased mass, which was accomplished, the patient being under the influence of ether, by an intra-oral operation; on removal of the tumor, it presented the appearance of non-malignant osteo-sarcoma.

Gun-shot Wound of Skull—Death.

Dr. SPEAR also presented a specimen of gun-shot wound of the cranium. A man, 31 years of age, had fired two loads of a revolver into the vicinity of the right eye suicidally. He was entirely conscious after the injury. One ball had broken the external angular process and lodged in the temporal fossa, the other had entered the malar bone, fractured the orbital plate of the frontal bone, and was found imbedded in the superior maxillary. He remained conscious nearly until the last, and died of meningitis, the brain being the seat of somewhat extensive sero-purulent effusion. Spiculæ of bone from the orbital plate were found to have entered the membranes of the brain.

Fracture of Skull—Trepining—Recovery.

Dr. REYNOLD presented specimens of the case of a boy, nine years of age, who about a month ago had fallen a depth of seventeen feet, striking his head against stone steps. There was a large gash, with indentation of the skull in the region of the temporal bone of the right side, the gash extending to near the ear. The patient was perfectly unconscious, and at first thought to present a hopeless case. But, on consultation, it was thought best to operate. The trephine was applied, the spiculæ removed, leaving, after the operation, an oval opening one inch, and an inch and a half in its diameters. The dura mater was found uninjured. Water-dressings were applied and the case left pretty much to nature. The boy recovered. The parts now present the sensation, to the touch, of a fontanelle. The operation was performed two hours after the accident.

Cysts Removed from Coccyx.

Dr. BUCK presented cysts which had been removed—one subcutaneous—from a young woman, 20 years of age. She remembers having had a lump in the coccygeal region since her fifth year, and which, since last summer, had rapidly increased. On examination, being found fluctuating, it was incised and discharged twenty-two ounces of serum and pus. The cysts were dissected out, and on removal disclosed the coccyx. A smaller tumor, the size of the phalanx of the thumb, was also removed.

Trephining for Pus below the Dura Mater.

Prof. HAMILTON presented specimens of the following case: In the fall of 1864, a young carpenter had been struck on his head, the blow being received on forehead of left side, and causing a fracture of the skull, both of the inner and outer table. There was no complaint, and the patient went about as usual, until after the lapse of twenty-one days. Then convulsions set in and he became almost senseless, the wound appeared to be a little swollen, as if pus were present. Forty-two days after the injury, he had become perfectly comatose, pulse 40, retention of urine, involuntary discharges, etc., and it was decided to trephine, especially as one side of the bone appeared depressed to a sharp point. A crucial incision was made and flaps dissected off; the bone was found necrosed and taken out, when it was found that the dura mater had also been depressed and communicated to the touch, below the seat of injury, the feeling of fluctuation. This fluctuation being perfectly distinct, the dura mater was incised, when about four ounces of dark coagulated blood, very offensive escaped, after which the flaps were brought together and cold-water dressings applied; soon the patient aroused and asked for something to eat. With the exception of some hernia cerebri, which was cut off, the case progressed favorably, and when last heard of, in 1865, the man was perfectly well. The case was interesting, as showing success of trephining for pus under the dura mater.

EDITORIAL DEPARTMENT.

Periscope.

Human Horn.

Dr. SILAS DURKEE reports, in the *Boston Med. and Surg. Journal*, a case of human horn, (*cornu cutaneum*, of ROKITSKY.) The horny excrescence growing on the right forehead, had existed (Dec. 24, 1864,) for the past six years in a patient, a female, 92 years of age. It commenced as a small hard pimple, rising just above the adjacent skin, and situated about an inch above the outer portion of the eyebrow. For three or four years it increased very gradually, and never caused much inconvenience, unless accidentally struck or brought in contact with clothing. When seen by Dr. DURKEE, it had a broad base, $4\frac{1}{2}$ inches in circumference, was of conical shape, inclined downward, like a ram's horn or the beak of a bird. Its length along the upper curve measured $3\frac{1}{2}$ inches. It was easily movable and not attached to bone. For the first half inch from its origin, it was soft and pulpy to the touch, consisting as it did, of an accumulation of concreted sebaceous matter confined in the dilated sac of a sebaceous duct. It bulged out and served as a sort of cushion or shoulder for the portion above

to rest upon. The latter was hard and unyielding under pressure. It was rough, and longitudinally ribbed, and marked by several irregular depressions. It had apparently a fibrous structure, the arrangement of its cells being parallel to its length. It tapered to a blunt point, bent downward and backward until it came in contact with the inferior portion one inch from its base. The color was of a dirty-white. In the early part of May, 1865, inflammation around the base began to increase, and a poultice, composed of the powdered root of *hydrastis canadensis*, was applied for several weeks, when the hard dense part of the horny texture was cast off. Subsequently, the impacted sebaceous matter enlarged the aperture of the soft follicular sac which constituted the base of the indurated mass, a still higher inflammation set in, followed by ulceration, which spread rapidly, destroying the walls of the hypertrophied sac. The diseased action assumed in all respects an unfavorable character, and is now (Dec. 13, 1865,) doubtless an epithelial cancer, covering a large portion of the forehead and yielding an exceedingly offensive discharge.

The patient has had two children, both of whom are living, one 75, the other 70 years of age, and both exempt from the malformation. Her grandmother had a cutaneous horn in the same locality with the one in the present instance, and which, Dr. D. was informed, terminated in a cancer, the woman living, however, to the extreme age of 96 years.

These tumors consist chiefly of albumen, a small quantity of mucus, phosphate of lime, chloride of sodium, and a trace of lactate of soda.

Prof. WILSON has collected 90 cases, of which 44 were females and 33 males; in the remainder, sex not mentioned. Of these, 48 seated on the head, 4 on the face, 4 on the nose, 11 on the thigh, 3 on the leg and foot, 6 on the back, 5 on the glans penis, and 9 on the trunk of the body.

The most remarkable case on record is that of a Mexican porter, whose horn, situated on the upper and lateral part of the head, was fourteen inches in circumference around its shaft, and divided above that point into three branches.

By the early application of alkaline or common water dressings, these growths are easily detached from the inner surface of the follicular tumors from which they spring, and by the use of caustics to the sac, the further abnormal cell-development can usually be arrested.

Bloodletting in Pneumonia.

Dr. D. W. YOUNG, of Aurora, Illinois, in an article in the *Chicago Medical Examiner*, concludes by urging that since bloodletting robs the blood of its vivifying and nutrient materials, by removing its red corpuscles, its globulin, hematin, phosphorus, fat, and potash salts, it compromises the constitutional powers of the patient; and inasmuch as we possess other equally efficacious remedies, wherewith we can accomplish the same results equally quick, without thus robbing the vital current of its life-supporting properties, therefore bloodletting in uncomplicated cases of pneumonia is unnecessary, uncalled for, and can only be justifiable in very rare and extreme cases.

Medical and Surgical Reporter.

PHILADELPHIA, MARCH 17, 1866.

INFANTIPHOBIA AND INFANTICIDE.

It would be a matter of high social interest to determine accurately—if it were possible to collect statistics regarding a matter so involved in secrecy—to what extent infantiphobia, which has lately been discussed in these columns, gives rise to infanticide, and criminal abortion. Without any idea that the statement is applicable to this country, or even to those localities here, where these crimes most prevail, it is proper to state that in regard to London, the opinion has been expressed, that of every thirty women met with in London streets, one had committed infanticide.

There are, of course, no fixed data upon which any opinion on this subject can be based. Our only means of approximating the extent to which these crimes are practised, are in the observation and casual knowledge which come to the physician in the course of his practice. And, discussing the subject with some gentlemen of the profession, since the article alluded to was published, we have been convinced that rather than having exaggerated the prevalence of these crimes, they probably are much more common than one might think.

What is the most shocking in the general experience which we have heard expressed by physicians is, that the crime of abortion is more prevalent among married women than among the single, and that the only reason given by them for killing their own offspring, and making their bodies dens of murder, is the *inconvenience* of having children. There is no plea of inability to raise children on account of poverty, but in the great majority of cases, the simple desire not to be bothered by babies, and not to be prevented by fulfilling maternal destiny, from running about town, visiting friends, dressing finely, and attending parties, theatres, balls and the like, is the only reason given for these abominable deeds. This is certainly carrying the law of convenience as far as the devil could wish.

In a very interesting discussion which recently took place in the Harveian Society of London, on the medical aspects of prostitution, among the causes of prostitution mentioned by Dr. DRYSDALE are two, which, as far as we know, form the two main causes of criminal abortion among married women—*vanity* and *idleness*. The desire to follow the vain occupations of fashionable life, to preserve youthful appearance, to be unencumbered by those household duties which the pres-

ence of children brings with them, are freely acknowledged as the motives. It is not the fear and dread of the pains of labor;—if that were the only motive, the habit of abortion among married women would be found among all classes of society, at all times, and in all countries; but they are willing to undergo, and freely expose themselves to as much suffering and danger of health or life, and even more, in order to kill their offspring, as they would have to bear in giving birth to the living.

It is proverbial that, if we may be allowed the expression in this democratic country, where everybody is everybody's equal, or claims to be, the lower we descend in the social scale, the greater we find prolificacy. The largest families of children are found, not among the wealthy, the aristocratic, the upper classes of society, but among the poor, or if not the absolutely poor, among the laboring men, the mechanics, the small farmers. And if we except, of course, criminal abortion among the comparatively small number who resort to it to cover the results of illicit intercourse, we find that the crime becomes more and more frequent as we ascend the social scale. Women, whose husbands are well to do, who can better afford to bring up a dozen children, than the poor Irish washer-woman one, are generally the ones who habitually resort to criminal means to prevent increase of family.

Mr. J. S. MILL, in his "Principles of Political Economy," in speaking of poverty, prostitution, etc., makes use of these words: "that little advance in morality can be expected until the production of large families is looked upon in the same light as drunkenness;" than which a more unstatesman-like and foolish doctrine, it has never been our fortune to meet. A political economy which is founded on the assumed theory that, children are an evil, deserves to be execrated. There are, it is true, political and social circumstances which govern England, and European countries generally, that render the production of large families among the poor an evil. But none of these circumstances and institutions upon which they depend, are beyond the reach of *reform*; and if one half of the sums expended for the sustenance of government institutions, which, as a whole, do not bestow the smallest benefit upon the people, were applied to educational purposes and the care of poor children, a complaint that children are an evil would never be heard again. An absurdity like this, in our country, is out of the question, where all political economists, especially at the present time, agree that the great desideratum is laboring

force, to till the soil, to develop our resources; and when we hail as welcome every shipload of emigrants to aid us in adding to the wealth of the nation, surely the woman who negatively aids in depopulating the country by killing her offspring, cannot in the broad light of political economy be considered else but a *public enemy*.

From whatever stand-point this matter is considered, either moral or social, we come back to the cause, and the possible prevention of the growing evil. There is, however widely we may search for at least some extenuating circumstances, no cause to be found for the existence of the crime in our midst, and its spread, except *misdirected, perverse female education*. We know that it is very fashionable now-a-days to talk of the rights of woman. But of what benefit will all legislative protection to secure woman work and proper wages be, if you continue to educate her in the belief that *idleness is her destiny*; that the first duty of the girl is to become a young lady, and get married; that no woman can be a lady who does her own household work, and unless she has a squad of servants about her? There is the bottom of the evil, plainly. We must knock out the bottom, if it is to be abolished. Educate girls to consider household work a duty and a pleasure, and to look upon married life as something else than hours of idleness, and you will find happier homes, merrier firesides, and fewer victims of criminal abortion and infanticide.

The subject is one of the first importance. There are many of the profession whose experience and observation could throw light upon the manner and extent with which these crimes are practised. Let them speak out.

MEDICAL AND SURGICAL HISTORY OF THE LATE WAR.*

IV.

Surgical Operations.

So far, 13,397 amputations for gun-shot injury have been examined and recorded, and the final results ascertained in 9705 cases. We omit the less important, and only give some of the most striking deductions. The returns corroborate the conclusions of DEPUTYREN, MALGAIGNE, and LECONSET, who combat the disfavor into which this operation has fallen. It was done unfrequently during the late war, but 19 cases recorded, in all of which the ultimate results have been ascertained; all terminated favorably. "The success," says Surgeon OTIS, "of TALLERON and other

French surgeons with this operation in the Crimea, is well known. Whenever, then, it is impracticable to amputate the forearm, disarticulation at the elbow should be preferred to amputation of the arm. The oval method answers the purpose best in this locality."

Of 1949 amputations of the arm, of which the results are ascertained, 1535 recovered.

Amputations at the Shoulder-joint.

The number of cases of amputation of the shoulder-joint reported is less than the number of cases of excisions of the head of the humerus, which latter operation was probably adopted in nearly all the cases in which it was admissible. Of the 237 terminated cases, 93 died, a ratio of mortality of 39.2.—6.7 per cent. greater than in excisions.

Amputations of the Leg.

Results ascertained in 2348 cases. Mortality 26.02, probably to be augmented by further examination of the returns.

Amputation of the knee-joint has been frequently performed. The returns to October, 1864, give 132 cases, of which 52 recovered and 64 died. In 6 cases, amputation of the thigh was subsequently performed, with 3 recoveries and 3 deaths. Of 49 cases of primary amputation at the knee-joint, 31 recovered and 16 died, while 2 underwent re-amputation, of whom 1 recovered and 1, a scrofulous subject, died. This gives a per centage of mortality in primary operations of the knee-joint, of 34.9. The mortality in primary amputation of the lower third of the thigh is much larger than this, and HUDSON and other manufacturers declare that the stumps from the operation at the knee-joint give a far better base of support than can be gained in thigh stumps.

Amputations of the Thigh.

In 1597 terminated cases, 568 recovered and 1029 died, or 64.43 per cent., which is within a fraction of the mortality after amputations of the thigh in the English army during the latter part of the Crimean war. In the French army in the Crimea, the whole number of amputations of the thigh for gun-shot injuries was 1666, of which 1531, or 91.89 per cent., terminated fatally.

Of these 1597 amputations, the date of operation is ascertained with precision in 1061. Of these; 423 were primary, and 638 intermediate or secondary. The ratio of mortality was 54.13 in the former, and 74.76 in the latter.

Amputations at the Hip-joint.

Of 21 cases reported, 3 recovered. The rest died, respectively, in 20 minutes, before removal to the ward, a few hours, less than an hour, an

* Extracts from Circular No. 6. Dr. OTIS' and WOODWARD'S Reports.

hour, less than 2 hours, 10 hours, less than 1 day, 1 day, 1 day, 1 day, 2 days, 4 days, 5 days, 8 days, 9 days, 19 days.

One of the most remarkable cases of successful hip-joint amputation on record is Dr. SHIPPEN'S case. Private James E. Kelly, Co. B, 56th Pa. Vols., 28 years of age, wounded, April 29, 1863, below Fredericksburg. A conoidal musket-ball, fired at a distance of about 300 yards, shattered his left femur. On consultation, ex-articulation of the femur was decided upon and performed by the single flap method, with little loss of blood. The patient progressed favorably in tent-hospital. By May 28th, all ligatures had been removed. June 15th, the patient was captured by the enemy and removed to Libby Prison. Up to this date there had been no bad symptoms. July 14th, he was exchanged and sent to U. S. A. General Hospital at Annapolis, much exhausted by profuse diarrhoea. Internal portion of the wound had united, but external portion was gangrenous. This yielded on application of chlorinated soda lotion. Dec. 23d, wound had entirely healed, and the patient was discharged. January 12th, 1865, he reports himself as in excellent health.

Another successful secondary case is given—Dr. PACKARD'S—the details of which we have recently given in our Periscopic department. Another successful secondary case is not included in the tabular statement, as it resulted from disease of the femur in consequence of amputation for injury by a bayonet wound of the knee-joint. The operation was performed by Surgeon ALEXANDER B. MOTT, U. S. V.

The total number of hip-joint amputations for gun-shot injury, including primary, intermediate, and secondary cases, recorded up to the late war is 82, of which 74 died and 8 recovered, or nearly 10 per cent., while the recoveries in the 21 cases of this war are 14.3 per cent. Since the report was put in print, two additional secondary cases have been reported. In one case, the patient died, four months after the operation, of pulmonary tuberculosis; in the other case, the patient was in a satisfactory condition thirteen months after the operation. The experience of M. JULES Roux in the Italian war seems to prove conclusively that secondary amputations at the hip-joint are less dangerous than primary ones, and early amputations at the hip-joint seem admissible in military surgery only in three conditions: when nearly the entire thigh is carried away by a large projectile; when the totality of the femur is destroyed by osteomyelitis, and possibly when, with comminution of the upper extremity of the

femur, the femoral vessels are wounded. The anterior single flap procedure has of late been generally preferred.

A REPLY FROM DR. ELLSWORTH.

Our notice of Dr. P. W. ELLSWORTH'S Essay upon the Trinity, has drawn from him an interesting reply, which only the pressure upon our columns of more strictly medical matter prevents us from inserting in full. So much of it as pertains to the *physiological* argument we will give in his own words. We repeat that, in the critical discussion of the theological question, we consider him to have the decided advantage over his opponents; that his argument does not need the support of the physiological theory which he advances; and we may add, that while we cannot agree with him that the comparative physiology of generation affords anything positive in favor of his train of reasoning, it still in no way contradicts the view advocated by him, that one mental or spiritual nature only can belong to a conscious individual being, who can use the pronoun *I* consistently.

The following is the physiological part of Dr. ELLSWORTH'S reply:

"In some animals there is no obvious distinction between the sexes,' therefore I am in error in the 'assertion as to the difference between the male and female endowments in reproduction.' You will observe that I do not say that point is positively proved, but that 'there is good evidence for the belief.' But if disproved, it cannot damage the theory, as we know that in Christ, the 'pneuma,' or himself, was from heaven, and from no earthly parent, (John viii. 23.) But the establishment of the proposition would do away with the necessity of a miracle in getting rid of that portion of soul otherwise derived from Mary, and which, if intelligent, must also carry with it a sinful nature from Adam.

"Neither does the theory appear weakened by the statement that 'there is no obvious distinction between the sexes in certain cases,' for there is no law of nature more general or better established than that development into new life cannot commence without an exterior and communicated impulse. The existence of hermaphrodites in plants and animals only confirms the necessity of the law, or at least its universality. This condition is found only in the lowest orders of life, where the relation of sex plays a very subordinate part in a moral aspect, or none at all; yet even here is a necessity for the sexes, organs being set apart for the respective duties of the male and female, one furnishing the germ, and the other a dynamic principle, without which fructification is impossible. If, as stated in the review, 'cells may in some instances unite to produce development,' does this ever occur originally in the process of generation? I doubt it. It

* Review of Dr. Ellsworth's pamphlet, *Mind & Soul*, Rev. current volume, p. 132.

may, however, in a body already organized, and then result in fissiparous generation, because there is then present an exterior vital force by which all cell-movements are controlled. Here the offspring is surely a part of the parent, both physical and mental. Whether this dynamic influence is a force or only an arbitrary connection, is a fit subject for inquiry, but the transmission of features, in man certainly, would show it was a controlling power.

"As to the souls of animals, we know about as much as the Jews before Christ did about their own after death. Christ came to bring immortality to light; he left many things, however, in the dark, we should like to understand. In scientific investigations, we must often be led and even governed by analogies, and these certainly exist in some degree in the lower orders, and the remark of a distinguished physiologist cannot be gainsayed. 'In comparing the mental phenomena of man and the lower orders, we find so many points of resemblance, and the dividing line between instinct and reason so indistinct, both being removed in all their phenomena from mere matter, that we are forced to admit as true, respecting the operations of one, what is absolutely proved as to the other.' God reveals little that has not a moral bearing, and therefore is mainly silent respecting the lower orders. Yet a reference is found to them in Eccl. iii. 21, where the word spirit is used. But God instructed the Jews by types and figures. The curse pronounced on animals as well as men, their common destruction in the flood, implied a connection of some sort. This may be suspected, especially by the latter event referred to in 1 Peter iii. 20, for if Noah was by a figure saved by baptism, why not animals so miraculously sharing the benefits of his faith, in that same figure. Still, Eccl. iii. 21, shows that there is an important distinction between man and the lower orders, not so much as to the mode and form of existence, but destiny.

"The disproof of the idea that the soul or 'pneuma' may be of paternal origin, does not, as stated in the review, give the upholders of the received view a better physiology in that respect, for what law in physiology, or psychology, or mental philosophy, can lead one to believe in two perfect and independent minds having but one identity? Yet Christ, being in one nature conscious only of weakness, and in another only of power, must have had a double consciousness. But admitting it possible, the explanation is no explanation at all, and leads to immense difficulties, as any one will find by answering these two questions: 1st. In what nature does Christ pray when he prays for the restoration of his glory, having as man never been in its possession, or as God never having laid it down. 2d. If *I* is personal and means him as a being, in what nature is he omnipotent, when he says 'I can do nothing of myself'? The fact is, that in order to get around a microscopic and doubtful difficulty in the lowest order of infusorial life, it is necessary to reject the first and most fundamental principle of mental philosophy, that every perfect mind must have its own independent consciousness and individuality, and that that which has its own

consciousness is a distinct individual. Christ, in coming to 'fulfil' all law, did not set all law at defiance at his very first step, and keep it up through his whole career. A correct translation of some of the texts on which I rely, greatly fortifies my position, but we cannot here enter upon it."

Notes and Comments.

The Philadelphia Dental College.

Last week we made a note of the third annual commencement of this institution. In our original notice of its inauguration, more than three years ago, we predicted its success, while we said that we did not believe that it would interfere with the prosperity of its older kindred institution, the Pennsylvania College of Dental Surgery. Both are prospering. Commencing with eleven students the first session, the former advanced to *twenty-six* the second, and to *forty-six* for the session just closed.

In addition to the regular course during the last session, Dr. JAMES E. GARRETSON—well known as a contributor to the pages of the REPORTER—has delivered a special course on *Surgical Anatomy*, demonstrating the various operations on the cadaver. Dr. HARRISON ALLEN has also given a special course on *Comparative Anatomy*, with special reference to the teeth of man and the lower animals.

✎ We are requested to say that twenty dollars is the highest limit that has been spoken of as the proposed increased rate for tickets in the medical colleges. In view of the increased cost of instruction, the amount would not be unreasonable.

Cholera.

If, as is generally apprehended, cholera should to visit this country this year, the space that is appropriated in our columns to that subject at this time, will prove to have been well occupied. The lectures of Professor ALONZO CLARK increase in interest and value, and will be found to be a very satisfactory résumé of all that is known on the subject. Besides these lectures, it will be seen that some of the most intelligent teachers and writers in the profession are discussing the subject, in communications and the proceedings of medical societies, in our columns. We shall, in addition, continue to make judicious selections on the subject, from other domestic and foreign sources.

Life Insurance.

We would call attention to the prosperous condition of the Connecticut Life Insurance Company, whose new advertisement will be found in another column. It is one of the most prosperous institutions of the kind in the country,—the dividend of last year being *sixty per cent.* All the Life Insurance Companies that advertise in the REPORTER are first class institutions.

The Medical Schools of this City.

The Jefferson Medical College of this city held its annual commencement last Saturday, and the University on Wednesday last. We put this number to press too early to do more this week than to say that the session in both schools has been a marked success. We learn that the University had 520 matriculants, and 160 graduates; and the Jefferson College 425 matriculants, and 165 graduates.

Asiatic Cholera.—Correction.

In Dr. SNOW's article in the REPORTER for March 3d, under the *Fifth* head, the sentence—

"The prevalence of the disease is in inverse ratio to the level of the sea," should read—

"The prevalence of the disease is in inverse ratio to the elevation above the level of the sea."

Patience!

We must ask the indulgence of correspondents for some delay in the publication of their articles. We have a large number of very valuable communications on hand, which will be published as rapidly as possible.

Correspondence.**FOREIGN.**

PARIS, January 22, 1866.

Hospitals of London and Paris.

EDITOR MEDICAL AND SURGICAL REPORTER:

To the hospitals of London and Paris, though subjects of primary professional interest, I have been able to give comparatively little attention, in consequence of the pressure of other important matters, but I have been gratified with a visit to two of them in each of these two cities. The first I visited was the "City of London Hospital for Diseases of the Chest," to which I was politely conducted and shown through by Dr. J. RISON BENNETT, one of the attending physicians, who is also, and has been for several years on the medical staff of St. THOMAS' Hospital. The former is admirably located at Victoria Park,

where it enjoys a very fine atmosphere, uncontaminated by immediate city influences. It is warmed by a hot-water apparatus, the air being introduced from without, through ample channels, into large chambers in the basement, and after being passed up into the wards through large flues, is removed by ventilating flues, whose draught is made effective by hot-water pipes. The wards have high ceilings, and the beds are few in proportion to the numbers usually found in general hospitals, care being had to furnish an ample supply of air for their occupants, as is especially requisite for patients of this class.

The number of *in-door* patients was not large at the time of my visit, but of *out-door* patients a large crowd was in waiting for the Doctor's advice. This latter department of this and other hospitals corresponds with the *dispensaries* of New York and other American cities, where the poor are prescribed for gratuitously, while residing at their own homes. The average number of cases treated in this institution is, of *in-door*, 440, of *out-door*, about 10,000, annually.

At the King's College Hospital, I witnessed two well executed surgical operations, one an amputation of the mamma by Mr. FERGUSON; the other, the removal of two internal hemorrhoidal tumors by Dr. HENRY SMITH, very dexterously performed by means of the clamp and scissors, hæmorrhage being arrested by the actual cautery. A large class of students was in attendance, to whom the nature of the case and the successive steps of the operation were lucidly explained. The anæsthetic employed in the first case was chloroform, the apprehensions entertained concerning it among us appearing to have little or no existence here. In the second operation no anæsthetic was deemed necessary. I learned from Mr. FERGUSON that nitrous-oxide, now coming into vogue in the United States, has not been used for this purpose at all in London.

With regard to the Parisian hospitals, I had an opportunity to decide a question which has long excited much interest and discussion among us at home, viz., as to the truth of the report that it was the custom to receive and to mingle promiscuously with the other patients, cases of small-pox and other contagious diseases. On the 19th inst., I followed, in his regular daily visit at the famous Hôtel Dieu, the eminent TROUSSEAU, between 8 and 10 A. M., and had no occasion to ask the question referred to, as the very first case we came to was one of confluent variola of the severest character. In the next bed, not more than four feet distant, was a case of paralysis, and in a third was another case of small-pox, both in a ward containing 13 beds, nearly all occupied by patients with various diseases. The next ward visited was a large one, having 86 beds, all but three or four occupied, and among them also was a case of small-pox, on reaching which, Dr. TROUSSEAU performed an operation of most singular character before a class of about 20 students fol-

lowing him in his rounds. Being desirous of explaining the specific character of the eruption, the patient was stripped of all his clothing, thus exposing his whole surface, and the doctor, taking a well-formed pustule between his thumb-nails, squeezed out its contents, showed it to the class, and then wiped his fingers on the sheet.

Introducing myself to him at the conclusion of the visit, I learned from him that these cases are no exception to the general rule, small-pox being admitted as freely as any other disease. There is no hospital for that disease exclusively in Paris—it being alleged that the small number of cases would not justify the expense—and the fear of contagion in common hospitals being greatly diminished in consequence of the almost universal prevalence of vaccination, which is to a great extent compulsory. The presence of three cases at one time in one hospital would, however, seem to deny the alleged slight prevalence of the disorder.

JOHN H. GRISCOM, M. D.

DOMESTIC.

Ozone.—Malaria.—Cholera.

EDITOR MEDICAL AND SURGICAL REPORTER:

Ozone is oxygen in a highly electro-negative condition, and that oxygen, by passing an electric current through it, may be combined with non-ozonized oxygen and form a galvanic circuit.

In support of this, I will offer a few facts that have come under my own observation. In dry sultry weather, when the minimum amount of ozone is present, the electric current of telegraph lines is frequently interrupted by coming in contact with the non-ozonized oxygen, which forms independent or contra-galvanic circuits, rendering the transmission of messages very difficult, or entirely impossible for the time being. A thunder-storm, at such times, always has the effect of destroying such contra circuits.

Telegraph lines, furthermore, always work more or less imperfectly in hot weather, particularly so in low latitudes, where they run parallel with large rivers, over swampy localities.

But in winter, particularly in the high latitudes, where the ground is usually hard frozen, and is thereby rendered a non-conductor of electricity, and the oxygen of the atmosphere is highly electrified, producing the maximum amount of ozone, messages may be transmitted and communication kept up four times the distance than in hot weather, because the local attraction of the earth is cut off by being frozen, and the oxygen being highly charged with electricity, or ozonized, completes its own galvanic circuit.

Ozone, in the maximum amount, is provocative of bronchial affections, etc. My observation

and experience is that the oxygen in a close room in a highly electrical condition (as shown by an electrometer) produces irritation of the bronchial membrane, and telegraph operators, when remaining for years in the business, are more or less subject to diseases of the respiratory organs. Such diseases are also more prevalent in winter than in summer, and are more common in the higher latitudes.

Ozone is destructive of malaria and beneficial to health during the prevalence of malarial epidemics, such as cholera.

That there is destruction of malaria by ozone is shown by the salutary effect of a thunder-storm in times of malarial epidemics.

In several instances, cholera has entirely disappeared from certain localities, after a severe thunder-storm. (Dr. HAMMOND'S Hygiene, page 165.)

It appears to be generally conceded that cholera is always accompanied with the minimum amount of ozone; and further, when the least amount of ozone existed, cholera prevailed to the greatest extent. (Same work, pp. 164, 165.)

I will not discuss the chemical effect of a pure or of a malarious atmosphere, relative to the circulation of the blood, etc., but confine myself to a few facts that came under my observation during the prevalence of cholera in this country, from 1849 to 1854, relative to ozone as a preventive of cholera, for I noticed that where there was the maximum amount of ozone there was no cholera.

The mere fact that there was a deficiency of ozone, is not proof that with ozone in its maximum there would have been no cholera, but that cholera has never prevailed in high latitudes in this country in winter when the maximum amount of ozone was present, is a strong presumption in its favor. Ozone, again, in large quantities, and malaria, seem never to exist in the atmosphere at the same time and place.

Now, I have endeavored to show that ozone is produced by electricity, that it is destructive of malaria, and that cholera is always accompanied by the least amount of ozone, and prevails to the greatest extent in low malarious localities. If these premises are true, we arrive at the conclusion that where ozone exists in its maximum amount there is no cholera. Another fact: in telegraph offices there is always the maximum amount of ozone, or oxygen in a highly electro condition.

During the prevalence of cholera in this country, from 1849 to 1854 inclusive, I was engaged in the telegraph business, and during that whole time never knew of an instance of

a telegraph operator dying of, or even being attacked by cholera. In those days, too, the telegraph offices in the river towns were generally situated on the low grounds, where cholera prevailed to the most alarming extent.

I most respectfully submit my deductions to the medical profession for their consideration and further investigation of the subject.

A. T. HAY.

Burlington, Iowa, Jan. 1st, 1866.

Acute Mania, resulting from Masturbation (P.)

EDITOR OF MEDICAL AND SURGICAL REPORTER:

William McCarty, a civilian, 25 years of age, a carpenter, employed in the Quarter Master's Department, at Morris Island, South Carolina, was sent to Provost Guard Hospital, Hilton Head, South Carolina, and admitted July 14th 1864, suffering from mania. On inquiring of his friends and companions, no cause for the present attack could be ascertained. Upon his admission to the hospital, the paroxysm was so severe as to render it impossible to keep him properly clothed. It was therefore necessary to restrain his movements with bandages applied to the hands and feet, etc. In the mean time, opiates, antispasmodics, etc., were employed; beef tea, wine, punch, etc., for nourishment. The patient continued restless and uncontrollable to such an extent, that a *body girt* was applied, and fastened to it, a rope leading through the floor; this was rendered necessary by his frequent and sudden attempts to injure the nurse, and in consequence of the bandages on his wrists and ankles having caused ulcers.

July 23d. The paroxysm having very considerably subsided, the patient was loosed, and a strict watch kept over his movements by the steward, who reports that he caught him in the act of masturbation. Some of the patients spoke to him in relation to it, when he was taken with an attack as at first. The usual remedies were had recourse to, but the patient gradually sank, and expired July 25th. Just prior to his death, there were involuntary ejaculations of semen, great thirst, and nothing could be retained on the stomach, and for a couple of days prior to his death, a partial paralysis of the lower extremities. I could not obtain a post mortem examination in consequence of his friends removing him to New York city.

H. S. HANNEN,

Late Assist. Surg., U. S. A.,
In charge Provost Guard Hospital,
Hilton Head, S. C.

Ellenboro', West Va.

The Paris Academy of Sciences has just awarded its Monthyon prize for statistics to M. Chenu, the well known army surgeon, for his work on the losses of the allied armies in the Crimea.

News and Miscellany.

ANNUAL COMMENCEMENTS.

Massachusetts Medical College.

This medical college held its annual commencement on the 7th inst. The graduating class was unusually large. Prof. STORER delivered the address to the graduating class. The faculty purpose publishing a complete catalogue of the past students of the school.

The following were the graduates, seventy in number:

British Provinces.—A. B. Atherton, J. L. Bunting, J. S. Calder, H. J. Fixott, T. R. Fullerton, M. T. Hobart, G. A. Jamison, J. A. McDonald, R. W. McKeagney—9.

Maine.—C. J. Milliken, C. W. Oleson, C. K. Packard, F. W. Payne, C. B. Robinson—5.

New Hampshire.—G. O. Allen, W. D. Chase, M. L. Gerould, S. Heath, E. J. Morgan, R. E. Perkins—6.

Vermont.—M. B. Campbell.

Massachusetts.—J. F. A. Adams, C. A. Ahearns, J. F. Appell, C. B. Braman, T. F. Breck, Winthrop Butler, N. S. Chamberlain, C. F. Coleman, S. Cushing, J. E. DeWolf, G. S. Eddy, E. A. L. Francois, L. E. Franks, A. S. Garland, J. O. Green, Thos. Hall, Jr., E. B. Harvey, R. C. Huse, R. M. Ingalls, O. H. Johnson, J. P. Lynam, W. M. Mercer, W. F. Munroe, P. F. Munde, C. E. Munn, W. M. Ogden, G. C. Osgood, S. Parker, W. H. Richards, C. H. Rice, G. A. Stuart, E. L. Sturtevant, C. C. Talbot, W. C. Tracy, A. C. Walker, B. G. Wilder, J. L. Williams, J. Wilmarth—38.

Rhode Island.—C. T. Gardner, N. G. Stanton.

Connecticut.—E. M. Harris.

New York.—R. D. Barber, J. G. Birch, R. S. Dryer, H. P. Shattuck.

Illinois.—O. B. Damon.

Wisconsin.—E. F. Spaulding.

Residence not named.—George Monroe, J. P. Gray.

College of Physicians and Surgeons, Medical Department of Columbia College, N. Y. Fifty-ninth Annual Commencement.

The annual commencement of this institution took place March 8th, 1866. The number of graduates is 112, as follows:

British Provinces.—Wm. G. Bryson, Geo. O. Burgess, John W. Clemesha, John Cowan, Marcus Dodd, T. K. Holmes, M. D., Joseph Johnson, A. Lawson, Wm. Morton, Joseph O'Dwyer, A. Stuart, Jos. Stubbs, A. H. Woodill—13.

Maine.—Geo. Cary, Henry F. Walker.

New Hampshire.—A. H. Foster, Geo. W. Grover, John G. McAllister.

Vermont.—Jas. M. Ayer, L. F. Bugbee, Edwin Phelps, M. D., R. H. Stone.

Massachusetts.—John W. Dooley, Charles I. Poore, Octavius B. Shreve.

Connecticut.—O. F. Harris, R. P. Thacher.

New York.—L. Applegate, David P. Austin,

E. W. Avery, Geo. M. Beard, C. M. Bell, Fred. C. Clark, T. E. Clark, W. A. Conway, Adam C. Corson, M. D., D. M. Cory, P. W. Cremin, Benj. F. Dawson, H. Dusenbury, Frank O. Earle, E. Frothingham, J. P. Garrish, Jr., R. S. Goodwin, Jay L. Greene, Jas. R. Gregory, Samuel Harris, Geo. E. Hawes, Edward C. Huse, E. Hutchinson, S. Hyde, John C. Jay, H. De Witt Joy, James S. Knox, M. Lampson, Chas. E. Lee, Thomas Le Guen, A. S. Leonard, Edward Maccomb, Walter Lindsay, Samuel K. Lyon, I. N. Mead, Geo. L. Menzie, H. W. Mitchell, Geo. W. Newcomb, Henry D. Nicoll, John W. Ostrander, Charles Roth, M. D., D. W. Searle, Thos. Skelding, David A. Smith, Samuel St. J. Smith, Chas. Washburn, Samuel Whitall, Jas. W. Wilson, Joseph E. Winston, Aug. Wohlfarth, Geo. P. Wright, J. W. Wright, G. H. Wynkoop, Geo. L. Yost, —54.

New Jersey—S. C. Baldwin, Wm. S. Combs, J. J. De Mott, Jas. D. Exton, D. McL. Forman, Jos. S. Hunt, Jas. C. Hutchison, R. D. James, J. C. Mead, John Moore, J. Otis Pinneo, Samuel F. Rouse, F. J. Van Wagner, Jas. D. Van Der-veer, H. C. Van Gieson, M. D., Cornelius Van Riper, Henry S. White, Charles Young—18.

Pennsylvania—Wm. H. McKelvy, Whitmer Saively, Walter Ure.

Delaware—Robert P. Jump, M. D.

Maryland—Wm. G. Ridout.

District of Columbia—Richmond J. Southworth.

Florida—Andrew Anderson.

Ohio—D. R. Francis, Samuel L. Kennedy, Jas. M. Study, M. D.

Indiana—James B. Hunter.

Michigan—Wm. H. Young, M. D.

Mexico—Francisco Repetto.

The Faculty prizes were awarded as follows: The first prize of \$50 was awarded to J. W. Wright, of this city; the second of \$25 to G. H. Wynkoop. D. M. Cory, Alexander Stuart, and J. S. Knox were honorably mentioned by the Faculty, because of the ability displayed in their Graduating Theses.

The Harsen prizes as follows: The first, of \$150, was awarded to William J. Hipper; the second, of \$75, to L. H. F. DeGuen, and the third, of \$25, to John Petrick, Jr.

It was announced that Dr. STEVENS, formerly President of the College of Physicians and Surgeons, had donated the sum of \$1000, to be invested as a Prize Fund, the interest of which was to be offered as a triennial prize, the first to be given at the annual commencement in 1869, and to be open to universal competition.

HENRY D. NICOLL, of the graduating class, delivered the valedictory address, which closed the exercises.

—Dr. DAVID JAYNE died in this city, on the 5th inst., of typhoid pneumonia, aged 66 years. About thirty years ago he established himself in this city as a druggist, and soon began the preparation and sale of proprietary medicines, from which he accumulated an ample fortune, a large proportion of which was spent in adorning Philadelphia with some of its finest stores and dwelling houses.

Processes of Disinfection.

A memorandum on disinfection has been issued by the Privy Council, (Great Britain). In view of the approaching epidemics, we give its main points, after the *Chemical News* and *Druggists' Circular*:

"1. For artificial disinfection, the agents most useful are—chloride of lime, quicklime, and Condyl's manganic compounds. Metallic salts—perchloride of iron, sulphate of iron, and chloride of zinc, are applicable. In certain cases chlorine gas or sulphurous acid gas may be used; and in other cases powdered charcoal or fresh earth.

"2. If perchloride of iron or chloride of zinc be used, the common concentrated solution may be diluted with eight or ten times its bulk of water. Sulphate of iron or chloride of lime may be used in the proportion of a pound to a gallon of water, taking care that the water completely dissolves the sulphate of iron, or has the chloride of lime thoroughly mixed with it. Condyl's stronger fluid (red) may be diluted with fifty times its bulk of water; his weaker fluid (green) with thirty times its bulk of water. Where the matters requiring to be disinfected are matters having an offensive smell, the disinfectant should be used till this smell has entirely ceased.

"3. In the ordinary emptying of privies or cesspools, use may be made of perchloride of iron or chloride of zinc, or of sulphate of iron. But where disease is present, it is best to use chloride of lime or Condyl's fluid. Where it is desirable to disinfect, before throwing away the evacuations from the bowels of persons suffering from certain diseases, the disinfectant should be put into the night-stool or bed-pan when about to be used by the patient.

"4. Heaps of manure or of other filth, if it be impossible or inexpedient to remove them, should be covered to the depth of two or three inches with a layer of freshly burnt vegetable charcoal in powder. Freshly burnt lime may be used in the same way, but is less effective than charcoal. If neither charcoal nor lime be at hand, the filth should be covered with a layer some inches thick of clean dry earth.

"5. Earth near dwellings, if it has become offensive or foul by the soakage of decaying animal or vegetable matter, should be treated on the same plan.

"6. Drains and ditches are best treated with chloride of lime, or with Condyl's fluid, or with perchloride of iron. A pound of good chloride of lime will generally well suffice to disinfect 1000 gallons of running sewage; but, of course, the quantity of disinfectant required will depend upon the amount of filth in the fluid to be disinfected.

"7. Linen and washing apparel requiring to be disinfected should without delay be set to soak in water containing per gallon about an ounce either of chloride of lime or of Condyl's red fluid. The latter, as not being corrosive, is preferable. Or the articles in question may be plunged at once into boiling water, and afterward, when at wash, be actually boiled in the washing water.

"8. Woollens, bedding, or clothing which can-

not be washed, may be disinfected by exposure for two or more hours in chambers constructed for the purpose to a temperature of 210 to 250 degrees Fahrenheit.

"9. For the disinfection of interiors of houses, the ceilings and walls should be washed with quicklime water. The wood-work should be well cleansed with soap and water, and subsequently washed with a solution of chloride of lime, about two ounces to the gallon.

"10. A room, no longer occupied, may be disinfected by sulphurous acid gas or chlorine gas—the first by burning in the room an ounce or two of flowers of sulphur in a pipkin; the second by setting in the room a dish containing a quarter of a pound of finely-powdered black oxyd of manganese, over which is poured half a pint of muriatic acid, previously mixed with a quarter of a pint of water. In either case, the doors, chimney, and windows of the room must be kept carefully closed during the process, which lasts for several hours."

Poisoning with Sulphates of Zinc and Iron.

The question, whether the sulphates of zinc and iron can be resorted to, to effect slow poisoning, came up in Malmesbury, England.

From the evidence given at the inquest, it appeared that Dr. **SALTER** was called in to the wife of a horse-doctor on the 12th April last, and continued so until the 23d, for uterine hæmorrhage and vomiting. The former complaint was soon cured, but the latter continued so obstinately and followed so constantly her husband's supplies of food and drink that, on that day, on her coming down stairs, she vomited in Dr. **SALTER**'s presence, and he then secured it; on the 25th, when he saw **LAIT** and his wife together, he felt it his duty to tell her, in the husband's presence, that her illness was not from disease, but from poison; that if she remained there, she would die, and he would not sign a certificate; but if she removed, she might be cured. It subsequently appeared that on that day **LAIT** called in Dr. **JES- TON**, but on the 29th, **LAIT** called at Dr. **SALTER**'s surgery, and said the sickness was just as bad; he was given powders of the oxalate of cerium. On the 7th, a message was left at Dr. **SALTER**'s surgery to say that Mrs. **LAIT** was dead. The two surgeons consulted together, and the result was that they both refused a certificate. An inquest was held, and a post-mortem and analysis ordered. The stomach was found greatly inflamed, particularly in the cardiac portion, the mucous surface raised by air blisters; the intestines were only moderately acted on; in the vomit, traces of sulphates of zinc and iron, so in the lower intestines, but in the food contained in the stomach and duodenum there was only sulphate of iron. The most suspicious part of this case lies in the fact that the woman was always sick after food or drink from her husband, and not otherwise, and she had always complained of a coppery taste in the mouth. The verdict returned by the jury was to the effect, but not in the exact words—Died from taking sulphate of zinc, a deadly poison, but by whom given is to the jurors unknown.—*London Pharmac. Journal.*

MARRIED.

GREENSHIELDS-McKAY.—In Bruce, Macombe county, Michigan, on Wednesday, 21st February, 1866, at the residence of the bride's father, by the Rev. Philo Hurd, Wm. Greenshields, M. D., and Miss Mary McKay, daughter of Robert McKay, Esq.

DIED.

ALMY.—In Cincinnati, Feb. 27, of typhoid pneumonia, Maria B. Almy, wife of Dr. S. O. Almy.

CRABTREE.—In Dundee, Ill., February 23, Florence Cornelia, youngest daughter of Dr. L. and Cornelia Crabtree, aged 2 years and 6 months.

DRANE.—In this city, on the 7th instant, Henry A. Drane, M. D., in the 25th year of his age.

GRIFFIN.—In New York, March 4, Alfred A. P., son of Dr. Thomas B. and Charlotte Griffin, aged 1 year, 3 months, and 5 days.

HAMMOND.—In Clinton, Wis., February 22, Mrs. Mary J. Hammond, wife of Dr. H. J. Hammond, aged 25 years, 1 month, and 2 days.

LYNN.—In Chicago, Ill., February 28, Dr. Isaiah P. Lynn, in the 40th year of his age.

SPONGE.—In Perth Amboy, N. J., March 3, Dr. Henry M. Stone.

WILEY.—In Cincinnati, Ohio, March 3d, Mrs. Adeline F., wife of Rev. J. W. Wiley, M. D., Editor of the *Ladies' Repository*.

ANSWERS TO CORRESPONDENTS.

Dr. W. C. P., *Head of Sassafras, Md.*—Hand Book of Practice, sent March 6th.

Dr. W. P. E., *New Market, Tenn.*—Case of Obstetrical Instruments, Davis' Forceps, Desmarre's Pliers, Pin Pliers, Silver wire, sent by Howard's Express, March 9th.

Dr. J. W. McC., *Minerva, Ohio.*—Flint's Practice, sent by Adam's Express, March 3d.

Dr. W. F. S., *Lower Chanceford, Pa.*—Seton Needle, sent by mail, March 9th.

Dr. J. C., *Massillon, Ohio.*—Dunglison's Human Physiology, Wilson's Human Anatomy, sent by mail, March 6th.

METEOROLOGY.

Feb. 1866,	26,	27,	28,	M. 1,	2,	3,	4.
Wind.....	W.	S.	N. E.	N. E.	N. E.	E.	N. W.
Weather.....	Clear.	Clear.	Clear.	Cl'dy.	Clear.	Cl'dy.	Clear.
Depth Rain.....						Heavy Fog.	High Wind.
Thermometer.							
Minimum.....	13°	18°	24°	27°	22°	34°	34°
At 8 A. M.....	30	32	31	35	41	42	45
At 12 M.....	27	45	39	43	54	46	51
At 3 P. M.....	27	46	39	45	55	47	49
Mean.....	22.75	35.25	33.25	37.60	43.	42.25	44.75
Barometer.							
At 12 M.....	30.8	30.4	30.5	30.4	30.2	30.2	30.

Germanstown, Pa.

B. J. LEEDON.

AMERICAN MEDICAL ASSOCIATION.

To Competitors for the Prizes, 1866.

1. All communications with motto attached, and name with motto in sealed envelope, must be sent to the Chairman of the Committee, Dr. **AUSTIN FLINT**, No. 257 Fourth Avenue, New York city, on or before April 15, 1866.

2. If the authorship of an essay is declared to any member of the Committee, said essay shall not be considered in competition for the prizes.

NOTICE.

The Twentieth Annual Meeting of the Association of Medical Superintendents of American Institutions for the Insane, will be held at Willard's Hotel, in the City of Washington, D. C.

The Session will commence at 10 A. M. of Tuesday, April 24th, 1866.

JOHN CURWEN, M. D.,

Secretary.

PENNSYLVANIA STATE LUNATIC HOSPITAL,
Harrisburg, March 26th, 1866.